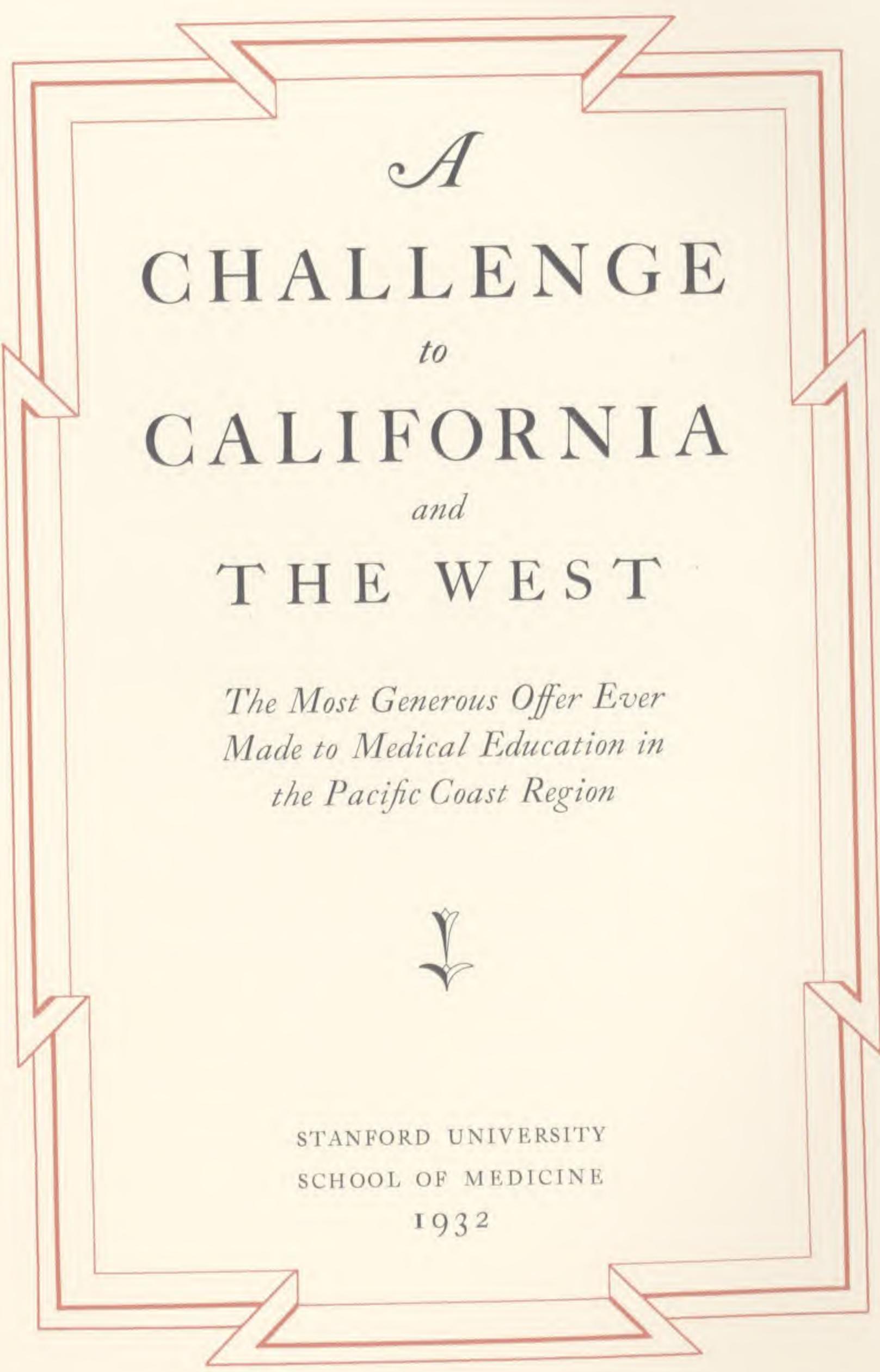


A CHALLENGE
TO CALIFORNIA
AND THE WEST







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*The Most Generous Offer Ever
Made to Medical Education in
the Pacific Coast Region*

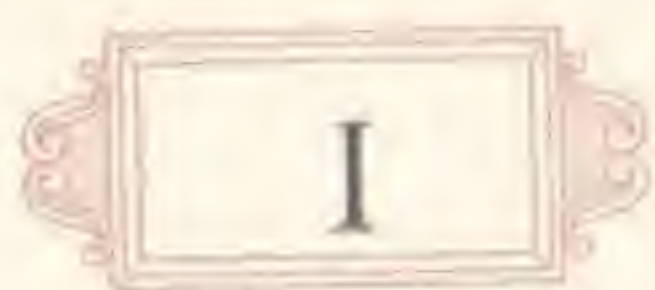


STANFORD UNIVERSITY
SCHOOL OF MEDICINE
1932



Architect's drawing of the building designed to replace the antiquated structure in which the Stanford University School of Medicine is now housed. An anonymous donor will give \$2,500,000 to cover the cost of the new building if other friends add \$1,250,000 to the School's endowment.

A CHALLENGE *to* CALIFORNIA *and* THE WEST



\$2,500,000 from an Anonymous Donor

AN anonymous donor has volunteered to give \$2,500,000 to the Stanford University School of Medicine for a new building, provided others will give \$1,250,000 to bring the School's endowment nearer to modern standards.

This is the most generous offer ever made to medical education in the West, and it is one that the West cannot afford to let go by default. Resources in this region for medical education and for investigation of disease have not grown in proportion to the population and wealth. The eleven far Western States now contain one-tenth of the people of the United States, but they contain far less than a tenth of the country's facilities for training physicians and for medical research. Of the nation's seventy-six approved, four-year schools of medicine, only six are situated in this vast area, and these are far below their Eastern counterparts in physical plants and endowments. Housed in a building erected in 1882, the Stanford School of Medicine in particular works under physical handicaps which would daunt any less vigorous spirit than that which animates its staff.

The School of Medicine does not, however, base its appeal for funds

solely on the present disparity just indicated. The West is the region of greatest growth; with an increase of 2,250,000 inhabitants, California topped all other states in rate of growth between 1920 and 1930. Sidewalks, boulevards, new homes, public utilities—all these will be ready for the influx of future millions, but if the West is to live up to the promise which it holds forth, it must have other services than these.

Looking Forward

Schools of medicine are the safeguards of much that is best in human life; they provide the leadership in medical care, hospitalization, public health, and research without which modern life could not endure. Expanding trade with the Orient and the islands of the Pacific suggests a host of health problems affecting the whole country, and these problems are best handled by institutions with a first-hand knowledge of the peoples and habits of life of the Orient. With every increase in population, more young men and young women will seek medical training, and the best of such training should be available without the sacrifice of long-distance travel.



A demonstration in surgical diagnosis

III

Training for Medical Practice

NOWHERE is Stanford's adherence to the best in education more marked than in the work of its medical division. It begins with a careful choice of students, and goes on to give students the advantages of close contact with teachers of distinction, a broad practical experience with patients, and a knowledge of the mental as well as the physical aspects of disease.

The entering class of the School is limited to fifty, and these fifty are the best qualified and most promising among the 150 to 175 candidates who seek admission each year.

To insure good material is one reason for limited enrollment, for the study and practice of medicine require definite natural qualifications, coupled with a thorough grounding in the sci-

ences. But another reason lies in the fact that wholesale methods cannot be used in the training given at the School. Medical education, even the best, used to be largely a matter of imparting facts, for the most part through the lecture process. According to the Stanford ideal, however, imparting facts is only one of the goals in medical education. Qualities of mind must also be developed—habits of keen observation and correct reasoning, thoroughness, alertness, and a zest for inquiry. Given these qualities the graduate goes into practice equipped not only with the latest in medical knowledge, but also with the tools which will enable him to keep pace with developments in medicine throughout his professional life.

Individualized Instruction

Two things are essential in this kind of training, the first being close association on the part of students with teachers of outstanding ability. You will see no large classes listening to lectures at the Stanford School of Medicine. In the laboratories, in the clinics, and in the hospital wards you will see small groups of students working in close association with men who are leaders in their professions. You will see many students working on independent research projects, for a second essential in this type of education is development of individual talents, initiative, and a sense of responsibility.

First-hand study of sick persons is another essential of medical training, and here Stanford is in the forefront. Lane Hospital was one of the first hospitals to be under the control of a school of medicine, and for many years the School has had the advantage of this close association. In ad-



Getting practical experience—student and instructor work up a case together

dition, Stanford is permitted to train medical students in the San Francisco Hospital, furnishing in return the services for 300 beds in this institution. The out-patient clinics of the School, with their 140,000 visits a year, provide ambulatory patients in such variety that the student gains a concentration of medical experience far beyond that of ordinary practice.

Stanford has been a pioneer in introducing the "clinical clerkship" into this phase of medical training. Instead of standing by and watching his instructor make examinations and work up histories, the student (under supervision, of course) carries on this work himself. He follows cases from diagnosis to termination of treatment exactly as he will in later practice. The "clinical clerkship" is an old feature of English medical education, and one of the most valuable of its many practical characteristics. Of American universities, Johns Hopkins was the first to adopt it, followed closely by Stanford and other progressive institutions.

Mind as Well as Body

In the not distant past, it was possible for a medical graduate to go into practice with little more than a smattering of knowledge about mental diseases; what little he did know would

be gleaned from observation of a few "asylum" cases. The young physician would not be familiar with the beginnings of mental disease as he might see them in his own waiting room; he would not know the personality trends and life situations which lead to mental disintegration, and he would not know how mental states can complicate physical conditions.

Stanford recognizes that knowledge of the mind is fundamental in medical practice. Its School of Medicine is today one of only three offering more than 150 hours of teaching in psychiatry, and this teaching is enriched by the fact that the psychiatric service in the clinics and in Lane Hospital is outstanding in the West. There are many angles of approach to the problem of mental disease, which lays a heavy burden on California as it does on every other state. None is more important, surely, than to give all who go into medical practice a



*They represent a strong and able faculty—department heads,
Stanford School of Medicine*



At the bedside, as in classroom and laboratory, teaching is carried on in small groups

sound general knowledge of mental illnesses, and to train some to be specialists in the field.

Well-Rounded Medical Education

Dr. Ray Lyman Wilbur has remarked that a skillful diagnosis represents one of the heights of ordinary human achievement, and it is equally true that good medical training represents one of the heights of educational effort. To bring medical school standards and practices abreast of modern needs has been one of the greatest movements in modern education, as well as one of the most significant tasks ever achieved for the good

of the people. In that movement Stanford has been among the pioneers and leaders, and, as a consequence, it is giving to the public physicians of high skill, and it is helping the West to medical leadership second to none.

And what has been said of training for medicine applies also to training for nursing. Connection with the School of Medicine and with the University gives the Stanford School of Nursing a host of educational advantages, all bearing upon the present-day need in nursing—the need for better trained, not more, members of this profession.



READING ROOM, LANE MEDICAL LIBRARY

*Physicians make wide use of the Library's notable collection of
medical books and journals*

IV

Helping the Practicing Physician

"IT seems clear that keeping physicians abreast of and competent to use new medical knowledge and methods is the most important factor in a complete and competent medical service for the community," says a current report prepared for the American Medical Association. The situation is clearly recognized by the Stanford School of Medicine, which offers special short courses for practicing physicians and provides the necessary training for those preparing themselves to be teachers, investigators, or practitioners in special branches of medicine. The total number who have been enrolled in such courses is close to 700.

The Lane Medical Lectureship brings national and international figures to San Francisco; there is an average attendance of 300 physicians at each of the five lectures in the series. A course of popular lectures is also given each year, at which medical topics of general interest are presented to the public. The semi-centennial of these popular lectures will be celebrated in 1932, and outstanding national authorities have been scheduled for the speakers. Under the auspices of the School, two demonstration clinics, one in medicine and one in surgery, are held weekly at the San Francisco Hospital and these are

largely attended by physicians of the Bay region.

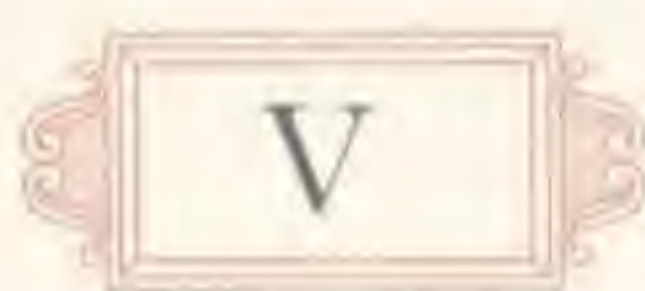
Lane Library Outstanding

The Lane Medical Library serves physicians throughout the entire West. Long the special object of Dr. Lane's interest, it stands among the first ten medical libraries of the country and holds an even higher place among university medical libraries. Many rare old medical books are included among the 75,000 volumes in the Library, the historical collection being particularly noteworthy. Many of these valuable acquisitions have come through the long-continued interest and generosity of Dr. Adolph Barkan, Dr. Emmet Rixford, and other members of the faculty.

Contemporary books and journals help the active practitioner to keep in touch with current developments in medicine, and a mail service makes the Library's facilities available to physicians over a wide area. The California State Medical Association has shown its appreciation of these services by helping to support the Library through a small per capita tax on its members. Many books are loaned to other schools of medicine, less favorably equipped, Lane Library serving the smaller libraries of the Pacific Coast much as the Army Medical Library serves those in the East.



Every week-day 450 persons, on an average, are cared for in the out-patient clinics. The total number of visits per year is 140,000



Family Physician to the Sick Poor

MORE and more the sick and needy of San Francisco turn to the Stanford out-patient clinics for medical and surgical aid. For many hours a week the School becomes a huge and busy physician's office. Four hundred and fifty persons, on an average, pass through the clinics each morning, and ministering to this stream of humanity is a staff made up of eighty physicians, forty or more senior medical

students, fifty paid assistants, and an equal number of volunteer workers. Interpreters of many foreign languages are on call. The yearly average of new patients has grown from 6,000 in 1913 to 15,000 in 1930; for the seventeen-year period *the total number of all visits is nearly 2,000,000*. Thirty-five per cent of all San Francisco's out-patient clinic work is carried on at the Stanford School of

Medicine, and this is one measure of the vital place which this institution holds in the city's welfare scheme.

Social Service

Work for the needy sick does not end with treatment in the clinics or hospitals. Illness is often the direct result of a home condition which must be corrected; successful convalescence often depends upon readjustment of the patient's life within the home. If a clinic patient is found to have a communicable disease, other members of the family circle must be protected against infection. Some individuals may require long-term institutional care, and such care must be arranged for by some person who understands both the case in question and the city's welfare facilities.

All problems of this kind fall within the scope of the social service department. Stanford social service workers make 7,000 home visits a year. They carry health education where it is most needed, and thus become powerful factors in raising the level of community health. A greater part of the work is carried on by trained public health nurses, but too much credit cannot be given to those volunteers who have, since the organization of the department, given unstintingly to the task.

Cost to the University

The clinic service costs a great deal more than it brings in. Expenses of

the out-patient clinics exceed income by nearly \$50,000 a year, the difference being made up by the San Francisco Community Chest and by the University. For the needy who require hospital care, Lane Hospital gives as much free service as its resources will allow. The ward rate is four dollars a day; the actual cost to the hospital is five dollars and forty cents. About 3,000 days of care a year are given away by Lane Hospital, and the total is swelled by the free service rendered by the School's staff at the San Francisco Hospital.

Through seeing patients treated in the clinics and hospitals, and by helping to care for them, the student learns the fundamentals of actual medical practice, but the needy sick are the gainers in the exchange. They command the services of physicians





Better trained—not more—nurses is the need of today. These graduates of the Stanford School of Nursing have had the benefit of unusual educational advantages

and surgeons ordinarily available only to persons of adequate means.

Work with Children

Work with children begins at the Stanford clinics with the pre-natal clinic which safeguards the health of expectant mothers and teaches them how to care for themselves and for the very young baby. The well-baby clinic examines from forty to fifty babies each week and advises mothers about feeding, clothing, and other problems. For children recovering

from operations or serious illnesses there is the Stanford Convalescent Home on the University Campus. Formerly the residence of the Stanford family, the Home has been developed by a group of philanthropic persons into a center for child care that is unusual for its charm and for the efficacy of its work.

Problems in Behavior

Nor does this essential work for children cease with striving for good physical development. One of the

most interesting of recent developments at the School of Medicine is the organization of a clinic for children who present problems in behavior. They are abnormally shy or abnormally quarrelsome, or they display some other potentially harmful trend in character or personality. Each problem of this kind is attacked in a fourfold way. A psychiatrist investigates the emotional life of the child; a physician examines the child from the point of view of physical health; a social worker studies home conditions, and a psychologist measures mental reactions. It is seldom that the cause of abnormal behavior cannot be discovered in the child and in his environment, and frequently a satisfac-

tory adjustment can be brought about. This work is of the utmost social importance, for the problem children of today are very likely to be the problem adults of tomorrow.

Stanford Hospital

The great bulk of the work done in the out-patient clinics is, of course, for persons coming from the Bay area. The concentration of medical skill presented by the School, however, draws patients from the northern and southern counties, and even from outside the state. Through Stanford Hospital, the private pavilion of the School, the same concentration of resources for diagnosis and treatment is available on a full-pay basis.

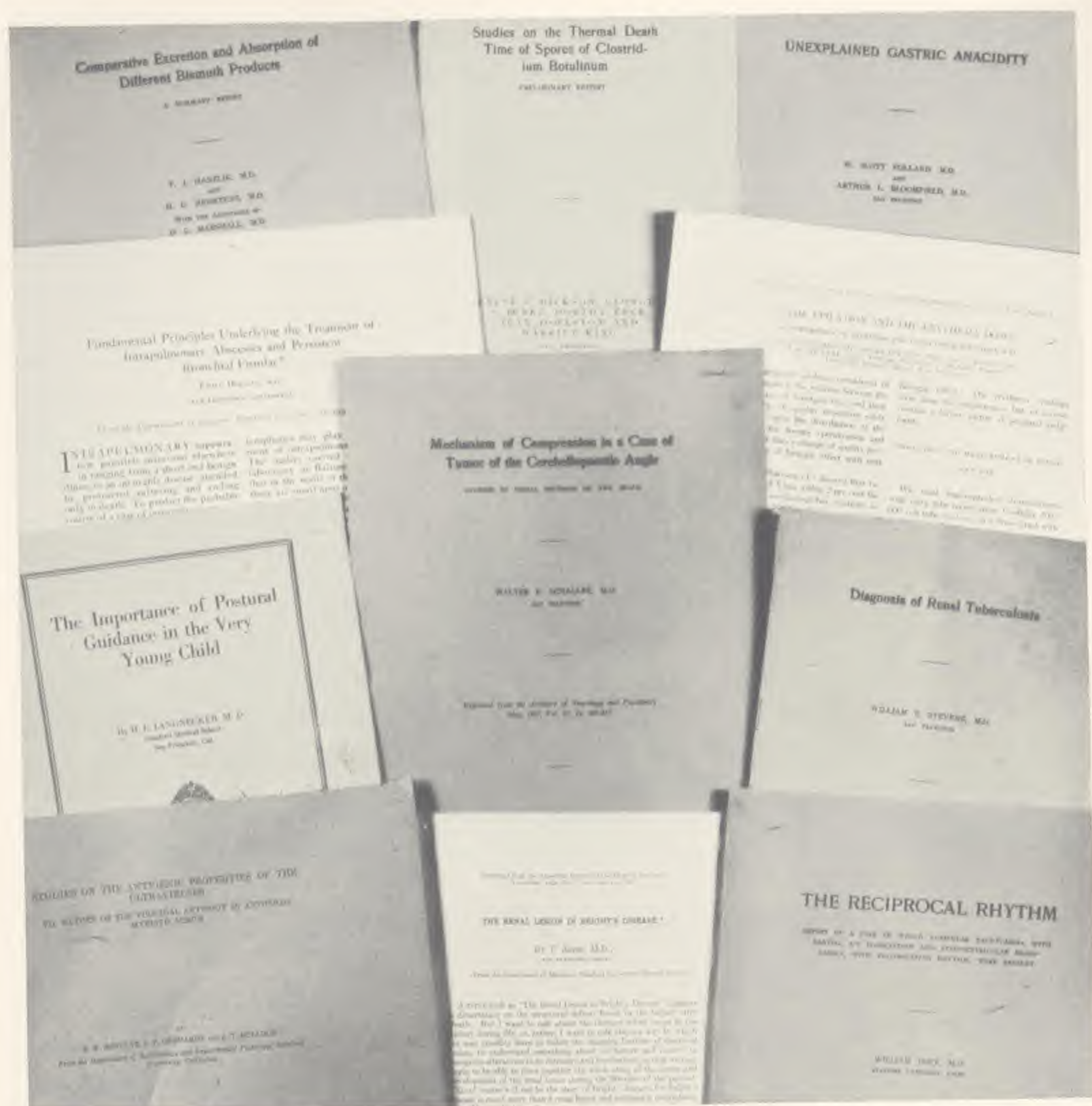
VI

Medical Research at Stanford

STANFORD's devotion to the best appears again in the research work of the School of Medicine. David Starr Jordan guided the University's first steps in medicine and in his plans for the School research held a foremost place—research, furthermore, which was to be directed largely toward the fundamental and theoretical phases of investigation. Under the leadership of President Wilbur, Dean from 1909 to 1916, and of Dr. William Ophüls, present Dean of the School, the medical division of the University has followed out this ideal, and has car-

ried on research work great in its scope and of first importance in the advancement of medical knowledge.

A short time ago the School made a survey of the publications of its staff members and found the total number for a ten-year period to be 1,295, an average of nearly 130 a year. This is in some measure indicative of the extent of the research work which has been carried on; its quality is attested by the gifts which have come from foundations and national organizations. In pursuance of the underlying policy of the School, a large share



Members of the School's staff contribute an average of 130 articles a year to scientific journals

of this work has been concerned with basic problems in anatomy, physiology, and allied sciences, with the aim of laying the foundations on which practical advances in the prevention and alleviation of suffering might rest.

There is now in progress at the School of Medicine an extensive

study of the anatomy and physiology of the kidney, with a view to determining the factors which influence the capacity of the uninjured parts of the kidney to grow larger and compensate for parts which have been damaged or destroyed by disease. This work has already received international recognition and ultimately, it is hoped, will

yield information of value in treating Bright's Disease.

Seeking Knowledge of Disease

Progress in the fight against infantile paralysis has been slow because so little is known of the nature of the invisible virus which causes the disease. Stanford's department of bacteriology recently succeeded in measuring the virus and is seeking additional information which may show whether the virus is an organism of simpler order than any hitherto found or a non-organic chemical substance. Another important piece of work has been the production in an immunized horse of infantile paralysis serum as potent as that obtained from convalescent human beings. In its general program of infantile paralysis research Stanford may be ranked with Harvard, Columbia, Chicago, and the Rockefeller Institute.

Also of great interest is the experimental work with the bacteriophage, a mysterious agent which destroys bacteria, and multiplies itself in the process. One hundred and thirty different bacteriophages are maintained in a special laboratory, and over half of these were discovered by the University's investigators. Extensive work is under way to determine the usefulness of the bacteriophage in combatting infections. Physicians may send in cultures of bacteria from infected patients, these cultures to be checked against the available 'phages. If one

is found which destroys the bacteria in question, a supply is sent to the physician, and his report on the results of treatment is added to the clinical records. About 500 such requests are received each year.

In another large program, several of the School's departments are seeking more complete knowledge of the endocrine glands. Functions of the pituitary gland, for example, are being carefully investigated with particular reference to the vital part which this organ plays in governing growth.

Wide Service Rendered

The department of pharmacology is one of the most active in the country. It is rendering a wide service in evaluating remedies and in developing methods of standardization. The United States Department of Agriculture has recently stationed in the department investigators who are making an extended study of the toxicity of metals, insecticides, preservatives and other products which may be found in foods, a matter of great importance to one of California's major industries.

General surgery and the surgical specialties are, of course, subjects of major concern and a Stanford research project in the surgical field recently won the Samuel D. Gross prize of the Philadelphia Academy of Medicine.

The research experts of the School,



A research expert of the United States Department of Agriculture has been stationed at the School to carry on important work with food products

working with those from the University of California, helped to control botulism, a virulent form of food poisoning which once threatened serious injury to the canning industry. They made the first report in the United States on *coccidioidal granuloma* (a disease resembling tuberculosis) and classified the organism causing it. Subsequent studies have resulted in the assembling of information on which a rational treatment can be based. Largely through the studies made by the School, *coccidioidal granuloma* has been made a reportable disease and its characteristics brought to the attention of the medical profession. Important studies have

been made showing the relative malignancy of various types of cancer.

New Treatments Developed

One of the effective remedies for use in treating paresis was recently developed at Stanford. It is "Iodobismitol," a bismuth compound worked out in the department of pharmacology and tested in the neuropsychiatric clinic. Patent rights have been given to the University, and a license granted to a manufacturer to produce the compound under conditions which will insure a controlled product sold at a reasonable price.

The hot-bath method of treating the same disease is another valuable

development worked out at the School. It has been known for some time that certain disease organisms cannot survive high body temperatures. To induce such high temperatures, victims of paresis have commonly been infected with malaria. The hot-bath method as used at Stanford has proved to be just as effective, and much safer, for it does not fasten a second, and sometimes fatal, disease on the sufferer, and avoids the dangers incurred by turning loose into the general population persons who might be carriers of malaria. It has also been shown that the hot-bath method is of benefit in treating the after-effects of sleeping sickness.

Death within a year from the time of diagnosis used to be frequent in cases of paresis, but, between the use of "Iodobismitol" and hot baths, *fifty per cent of complete arrests* have been secured among the patients treated in Lane Hospital. Even where mental deterioration has set in it is often possible to arrest the process, and thus many who would otherwise swell the enormous number of syphilitic patients in public institutions may remain self-supporting members of society.

Endowment Doubly Helpful

The \$1,250,000 endowment now being sought for the School of Medicine will be of inestimable direct benefit to research activities. More-

over, it will bring about construction of a new and adequate building which will in itself furnish great impetus and encouragement. And in the never-ending struggle against disease how much remains to be done!

The ravages of cancer are an increasing horror, and in almost every group of children is a pitiful example of the crippling effects of infantile paralysis. Heart disease in its many forms tops all other causes of death. The decline in tuberculosis has come about largely through preventive work with children; this old enemy is still the leading cause of death in early maturity and early middle-age. Mental disease, in spite of the brilliant work in the past few years, presents a field of which vast portions remain to be explored.

Co-operative Effort

One by one these enemies of mankind will yield, but it seems clear that they will be conquered only by such large-scale effort as is represented by the Stanford School of Medicine and its allied resources. Physics, chemistry, the biological sciences, and even mathematics are used more and more in the study of medical problems, and here the School of Medicine has the advantage of full and free co-operation with the departments of a University long known for its strength in science.



Space at a premium—the crowded office-laboratory of a department head, used also for storage of records and supplies

VIII

Shall Stanford Foot the List?

THE PAST fifteen years have been the most wonderful in the history of American medical education. They have witnessed revolutions in method and an unparalleled flood of gifts for buildings, endowment, and for research projects. The American Medical Association estimates that since 1916 the value of the plants and endowments of medical schools in the United States has *increased by \$350,000,000*. A part of this increase has come from rising land values, and

a great portion has come from foundations and from appropriations made by states and municipalities. But at least \$150,000,000 is to be credited to private generosity.

What Some Schools Have Received

One of the most striking features of the period has been the response of regions served by medical schools to the needs of these institutions. The Western Reserve School of Medicine, for example, has received

\$13,500,000 in gifts from friends in the Cleveland area. The St. Louis region has raised \$9,000,000 for Washington University's medical school, and the medical department of the University of Indiana has received gifts amounting to \$2,800,000 from citizens of Indianapolis alone. Citizens of New Haven have given \$6,500,000 to the Yale School of Medicine and affiliated departments, and many additional gifts have come from other parts of New England.

Stanford the Exception

Within the past few years nearly every medical school in the country has received new laboratories, new hospitals, generous endowments. Yet up to the present time Stanford has not shared in this general expression

of the Commonwealth's growing interest in medical education. Now the contingent offer of \$2,500,000 gives friends of the University a magnificent opportunity to provide the School of Medicine with some of the resources it so richly deserves.

It is a challenge which California and the West cannot ignore. The proper endowment and equipment of this great community asset cannot longer be neglected. The School must be adequately prepared to carry forward the scientific, educational, and humanitarian work so vital to the welfare of all. To help in this project, and to have a personal share in it are opportunities which will bring a generous response from those who have at heart the best interests of California and the West.





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